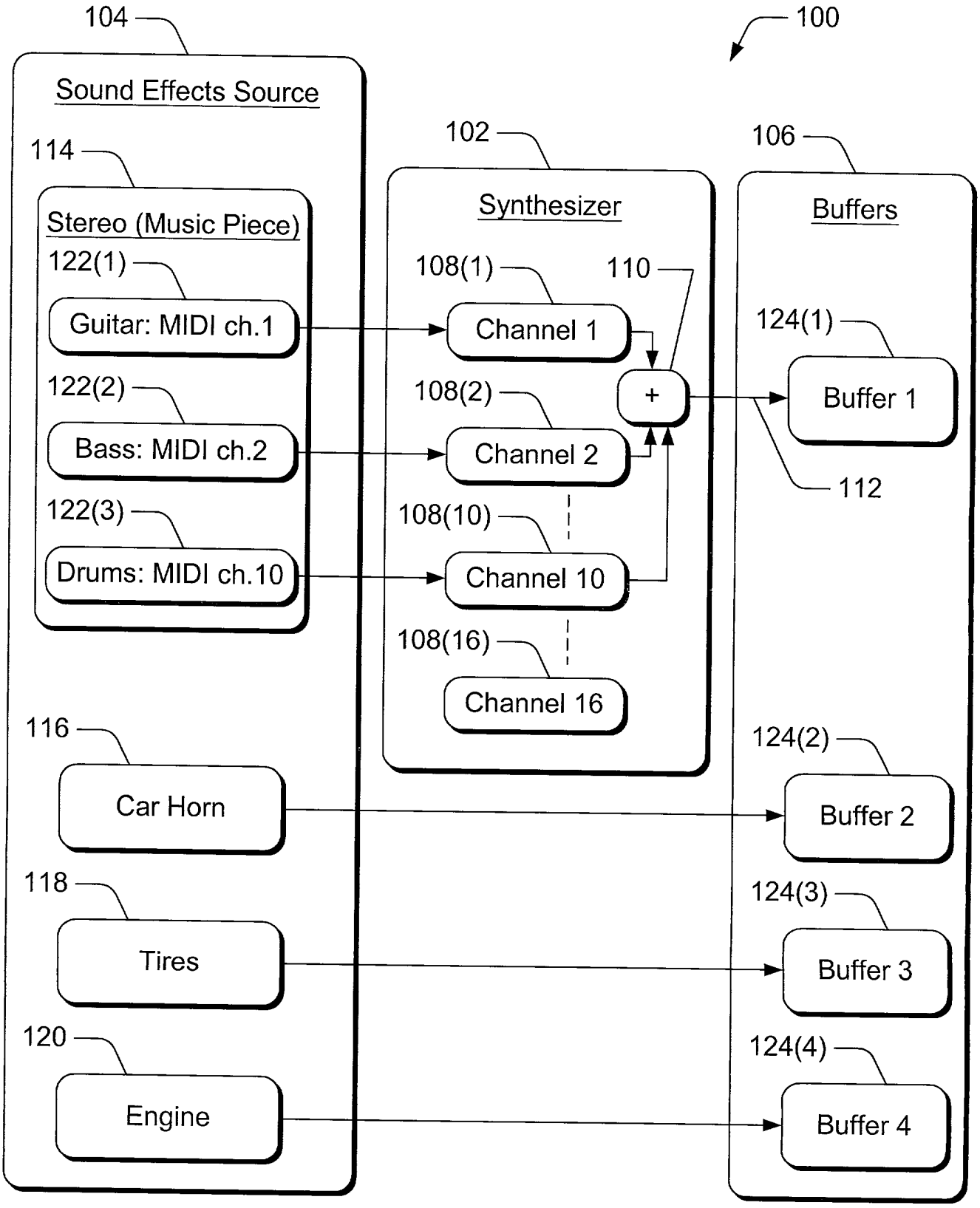

Fig. 1
Prior Art

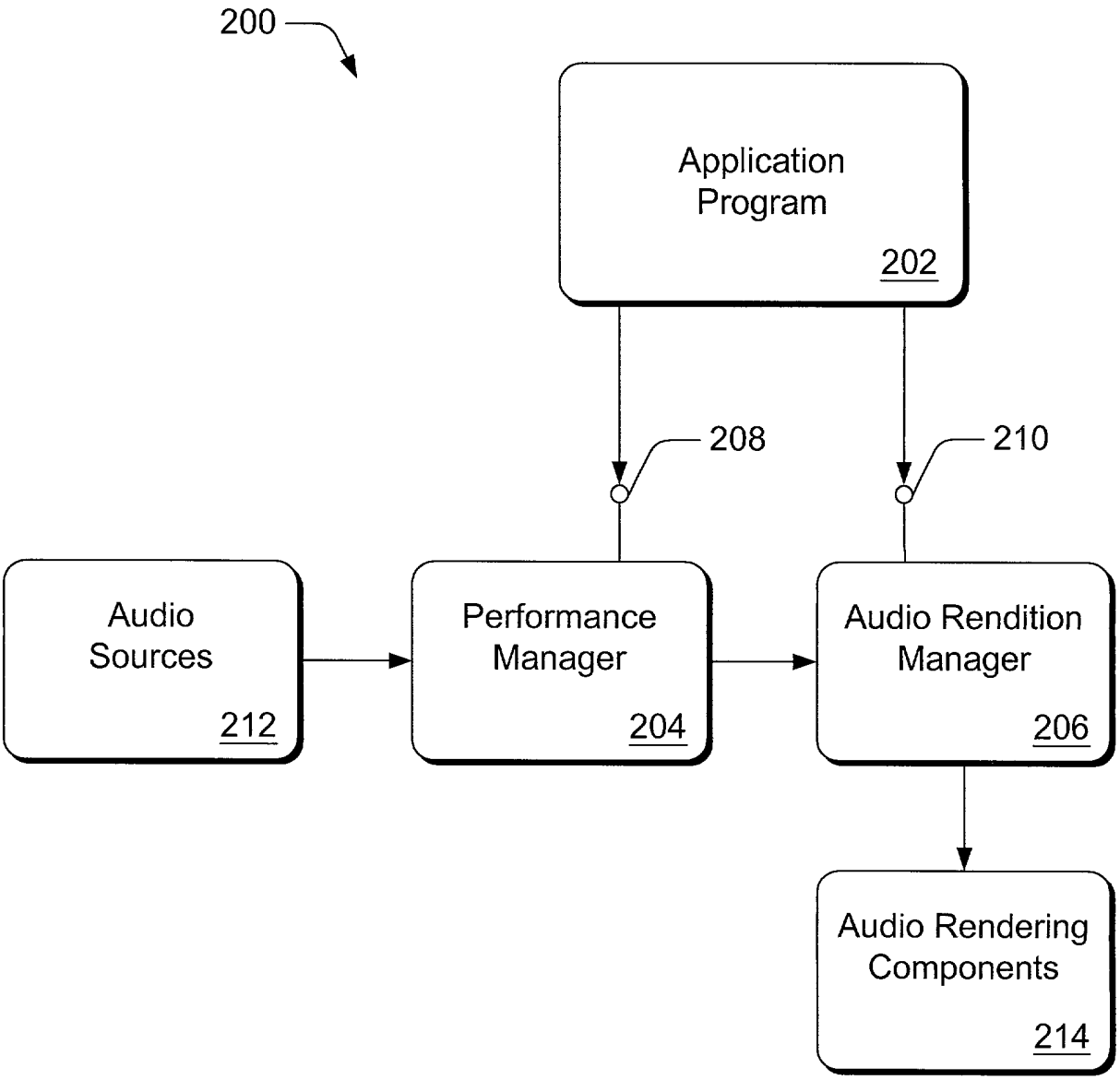
200
Application Program
202
208
210
Audio Sources
212
Performance Manager
204
Audio Rendition Manager
206
Audio Rendering Components
214

Fig. 2

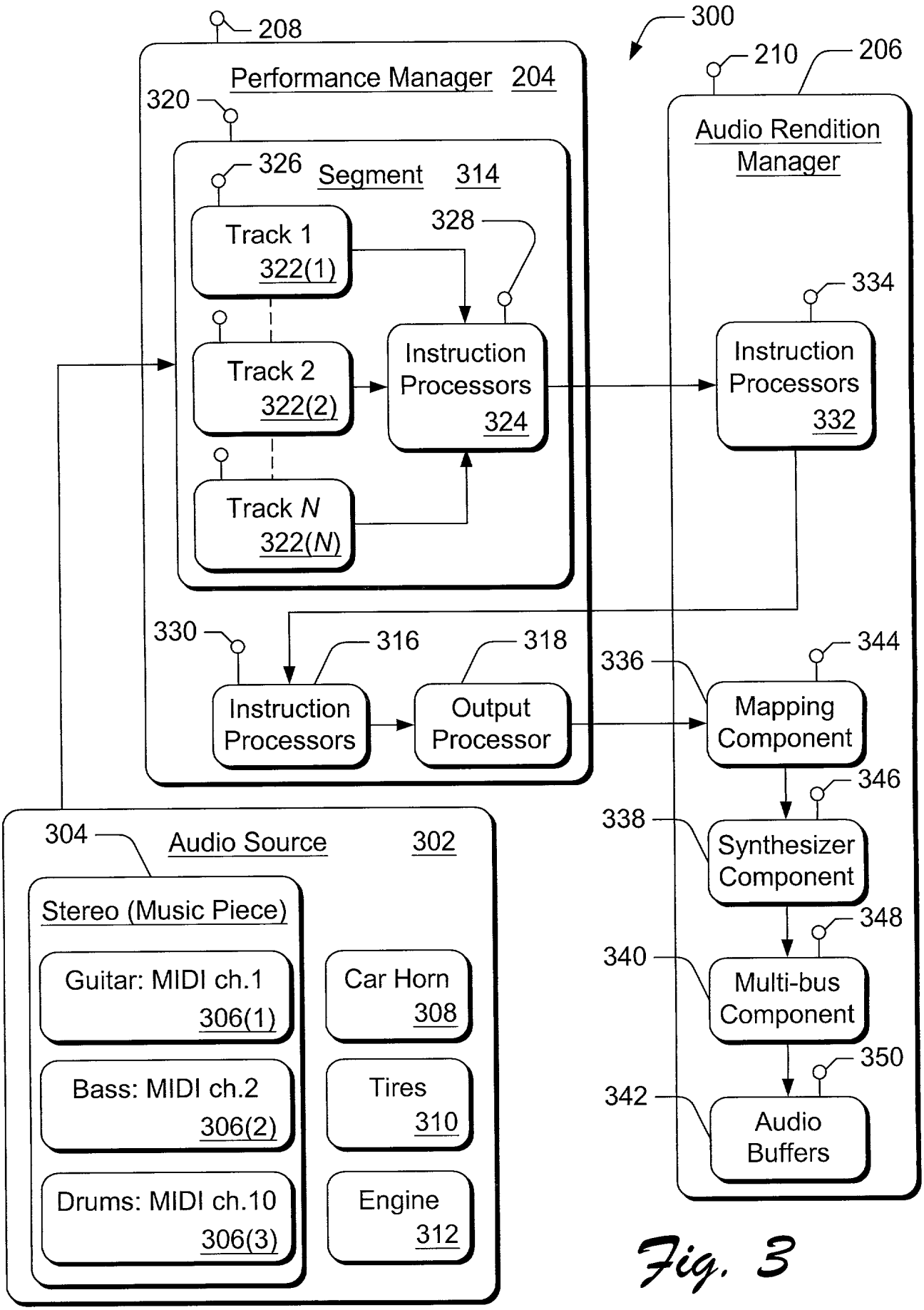

Fig. 3

5,956,485

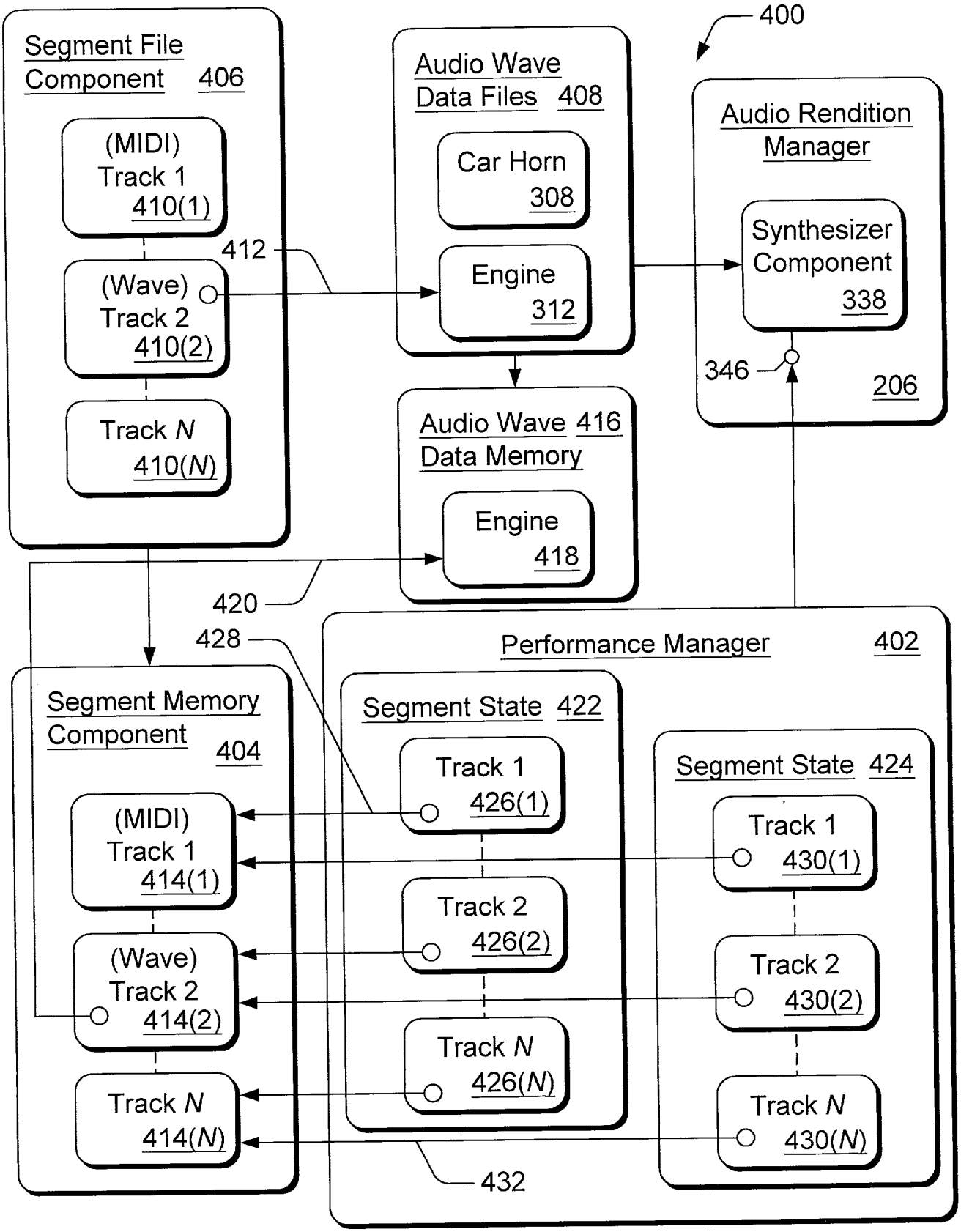
400
Segment File Component 406
(MIDI) Track 1 410(1)
(Wave) Track 2 410(2)
Track N 410(N)
412
Audio Wave Data Files 408
Car Horn 308
Engine 312
Audio Rendition Manager
Synthesizer Component 338
346
206
Audio Wave Data Memory 416
Engine 418
420
428
Performance Manager 402
Segment Memory Component 404
(MIDI) Track 1 414(1)
(Wave) Track 2 414(2)
Track N 414(N)
Segment State 422
Track 1 426(1)
Track 2 426(2)
Track N 426(N)
Segment State 424
Track 1 430(1)
Track 2 430(2)
Track N 430(N)
432

Fig. 4

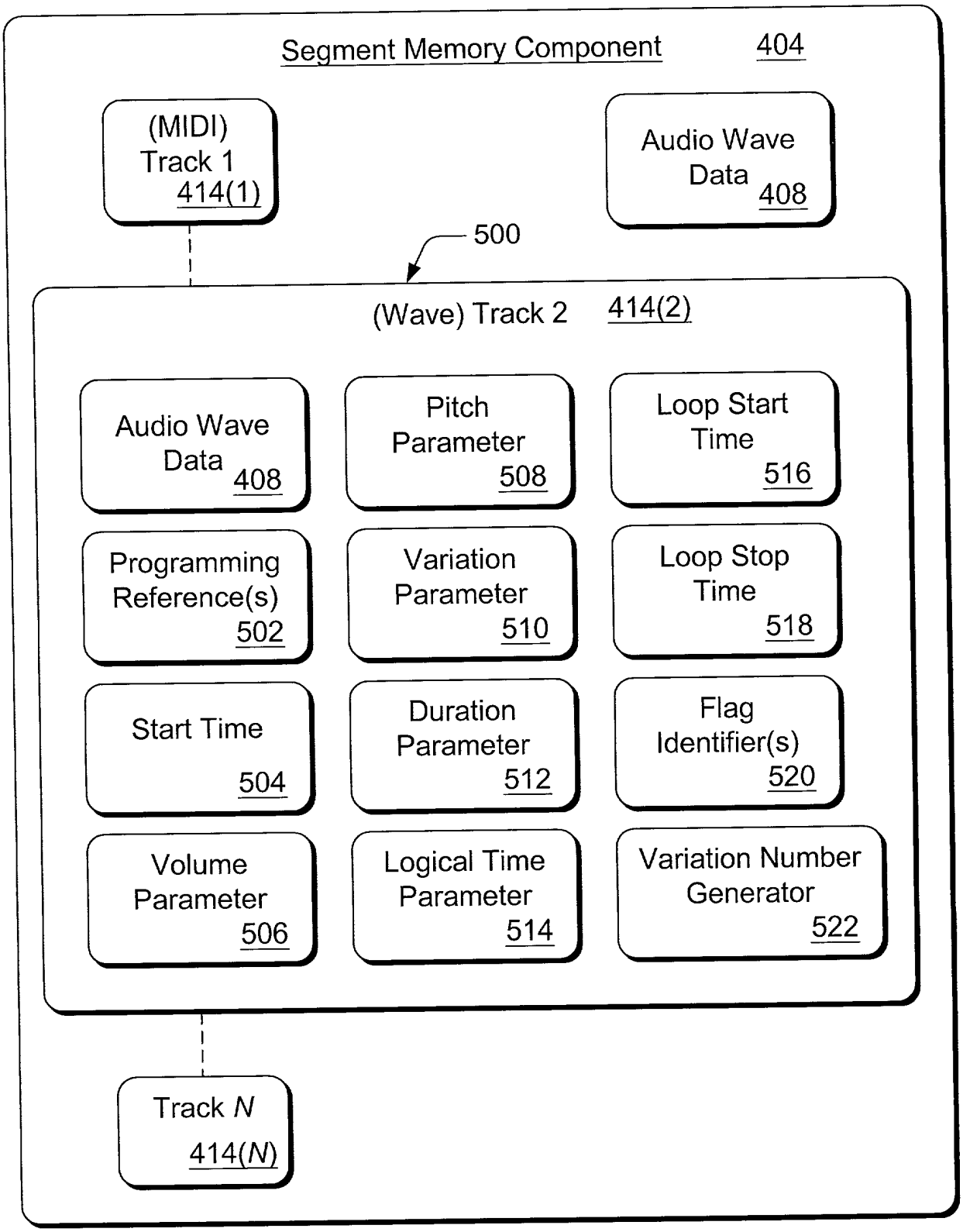
Segment Memory Component 404
(MIDI) Track 1 414(1)
Audio Wave Data 408
500
(Wave) Track 2 414(2)
Audio Wave Data 408
Pitch Parameter 508
Loop Start Time 516
Programming Reference(s) 502
Variation Parameter 510
Loop Stop Time 518
Start Time 504
Duration Parameter 512
Flag Identifier(s) 520
Volume Parameter 506
Logical Time Parameter 514
Variation Number Generator 522
Track N 414(N)

Fig. 5

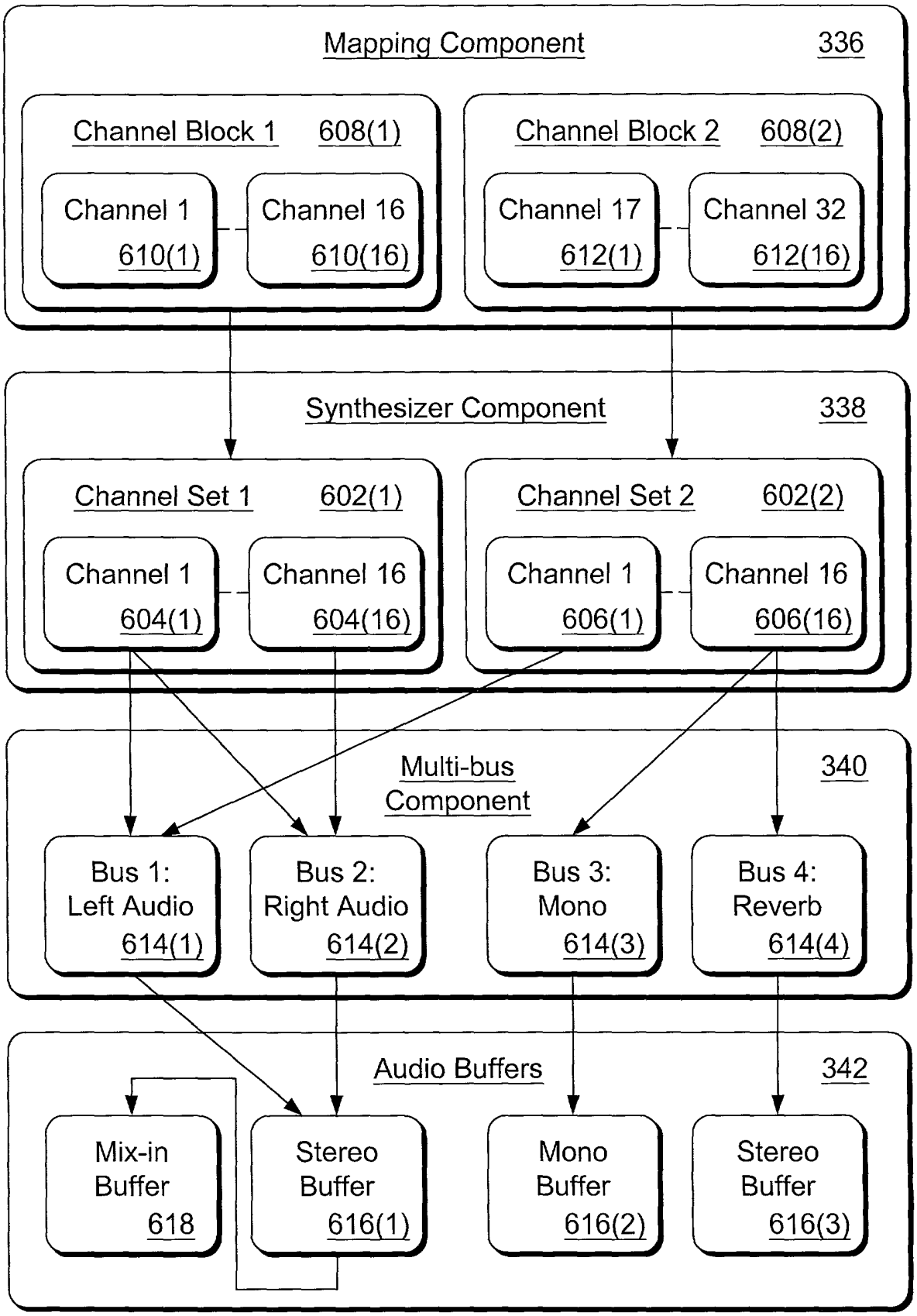
Mapping Component
336
Channel Block 1
608(1)
Channel 1
610(1)
Channel 16
610(16)
Channel Block 2
608(2)
Channel 17
612(1)
Channel 32
612(16)
Synthesizer Component
338
Channel Set 1
602(1)
Channel 1
604(1)
Channel 16
604(16)
Channel Set 2
602(2)
Channel 1
606(1)
Channel 16
606(16)
Multi-bus
Component
340
Bus 1:
Left Audio
614(1)
Bus 2:
Right Audio
614(2)
Bus 3:
Mono
614(3)
Bus 4:
Reverb
614(4)
Audio Buffers
342
Mix-in
Buffer
618
Stereo
Buffer
616(1)
Mono
Buffer
616(2)
Stereo
Buffer
616(3)

Fig. 6

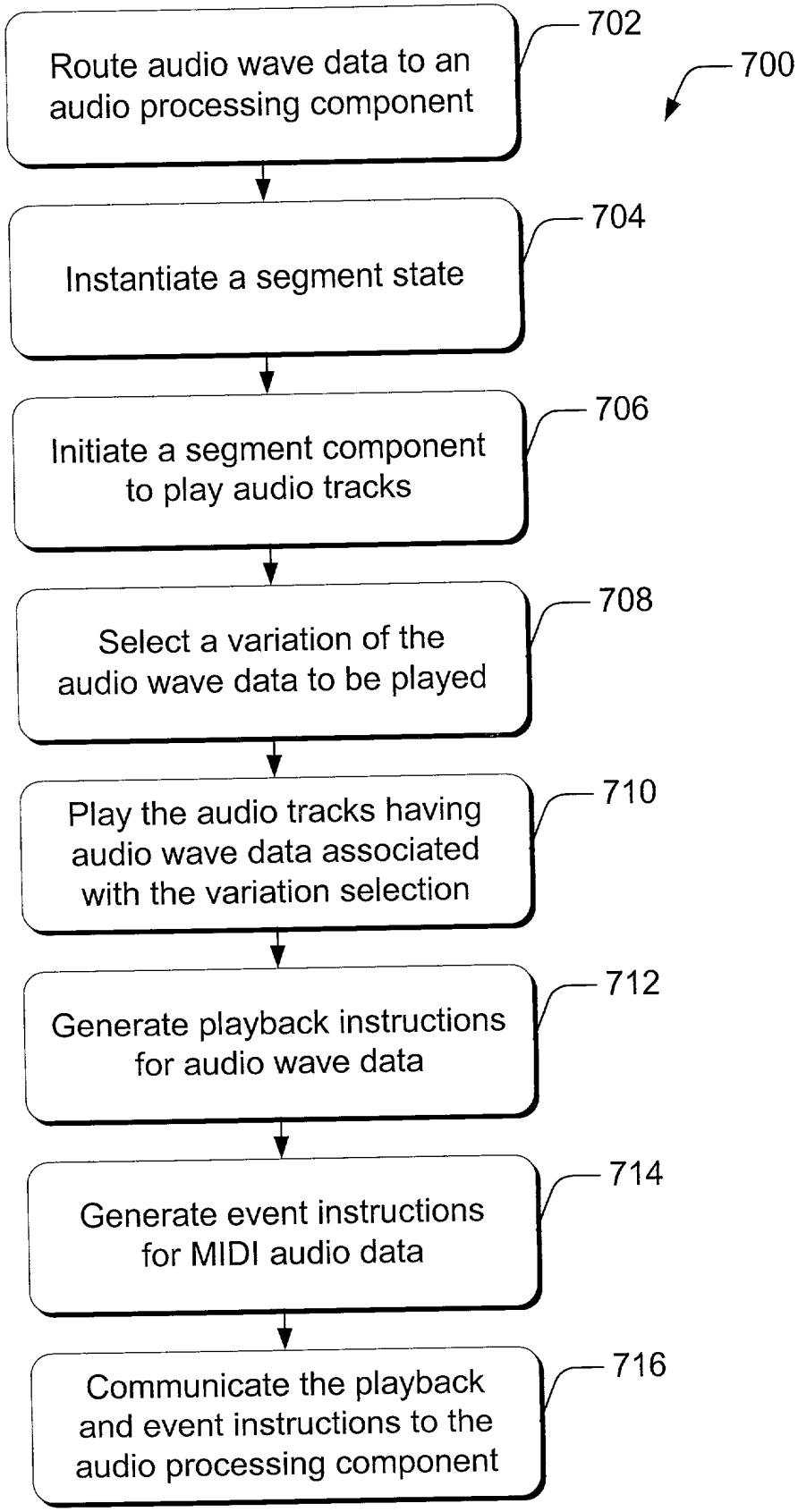
Route audio wave data to an audio processing component
702
700
Instantiate a segment state
704
Initiate a segment component to play audio tracks
706
Select a variation of the audio wave data to be played
708
Play the audio tracks having audio wave data associated with the variation selection
710
Generate playback instructions for audio wave data
712
Generate event instructions for MIDI audio data
714
Communicate the playback and event instructions to the audio processing component
716

Fig. 7

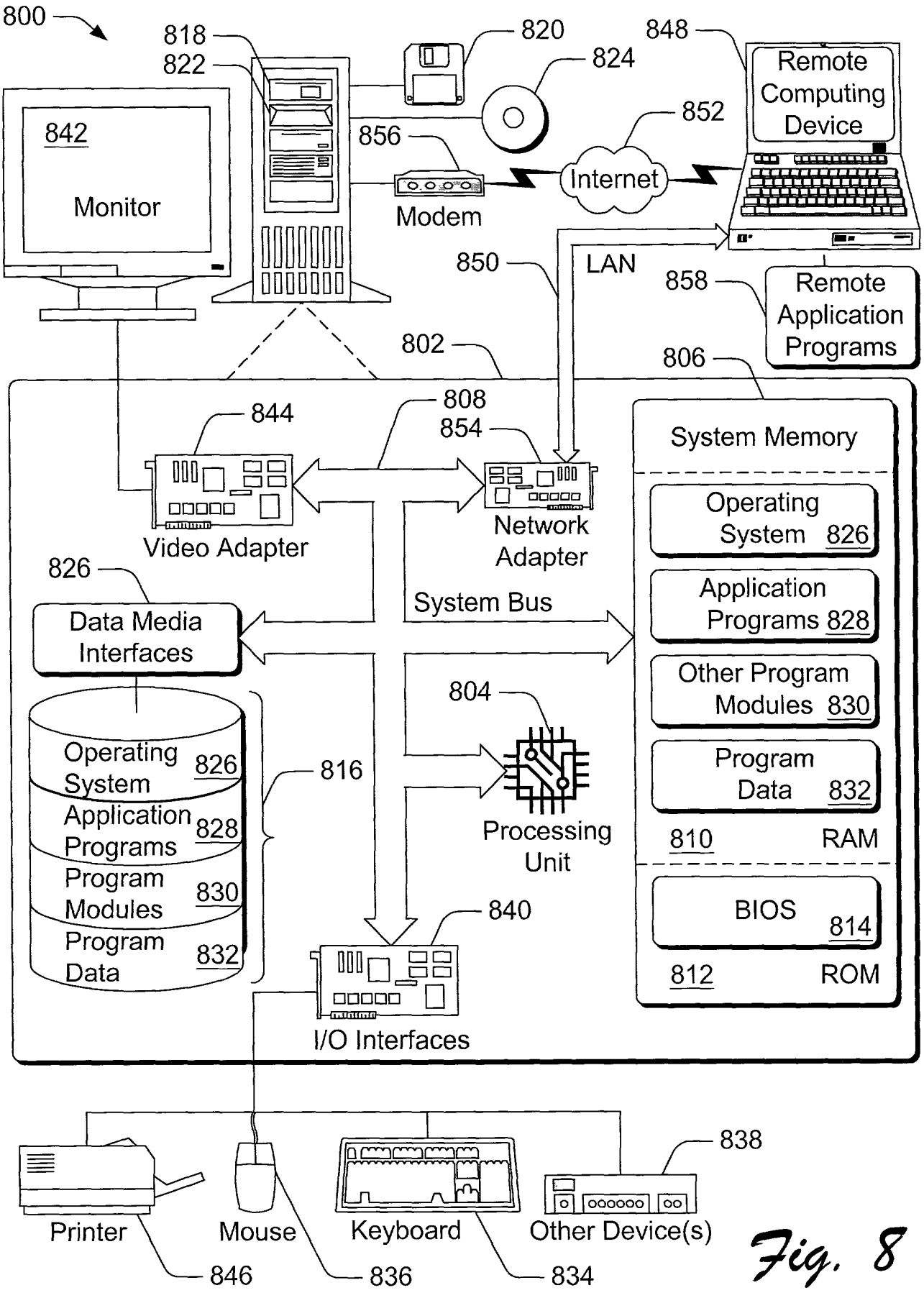
800
818
822
820
824
848
Remote Computing Device
852
842
Monitor
856
Modem
Internet
850
LAN
858
Remote Application Programs
802
806
844
808
854
System Memory
Operating System 826
Application Programs 828
Other Program Modules 830
Program Data 832
Video Adapter
Network Adapter
826
Data Media Interfaces
System Bus
804
816
Operating System 826
Application Programs 828
Program Modules 830
Program Data 832
Processing Unit
810
RAM
BIOS 814
812
ROM
840
I/O Interfaces
838
Printer
Mouse
Keyboard
Other Device(s)
846
836
834

Fig. 8